WEBINAR

Empowering Research with the BIOMATERIAL DATABASE: Tools and Insights

When: February 11, 2025 | 10:00-11:30
Where: Online

BIOMATDB

SYNYO

Barcelona Supercomputing Center
Centro Nacional de Supercomputación

UNIVERSITY OF OSLO

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

Tampereen yliopisto
Tampere University

Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

MINDS & SPARKS

CEC

CLUST-ER HEALTH
SALUTE E BENESSERE

NUI Galway
OÉ Gaillimh

Niño Jesús

ECHAlliance

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AGENDA

BIOMATDB

Time	Topic	Presenter
10:00 - 10:05	Welcome & Announce Recording	**Alexander Nikolov** - SYNYO GmbH, Austria
10:05 - 10:10	Getting to know our audience	**Celine Rabe -** MINDS & SPARKS GmbH, Austria
10:10 - 10:25	Introduction to the BIOMATDB Project	**Celine Rabe -** MINDS & SPARKS GmbH, Austria
10:25 - 10:40	Discovering the Tools & Benefits of the BIOMATERIAL DATABASE	**Tilman Kerl** - SYNYO GmbH, Austria**;** **Athina Samara** - University of Oslo, Norway
10:40 - 10:55	Live Demo of the BIOMATERIAL DATABASE	**Tilman Kerl** - SYNYO GmbH, Austria
10:55 - 11:30	Q&A	All participants

HOUSEKEEPING RULES

The session will be entirely recorded and published on the BIOMATDB project website.

All participants except speakers and moderators will be **muted by default**.

Feel free to post your questionsions in the **chat**.

If you would like to speak, raise your hand and wait for the moderator to give you the floor.

SHORT SURVEY – 1 min

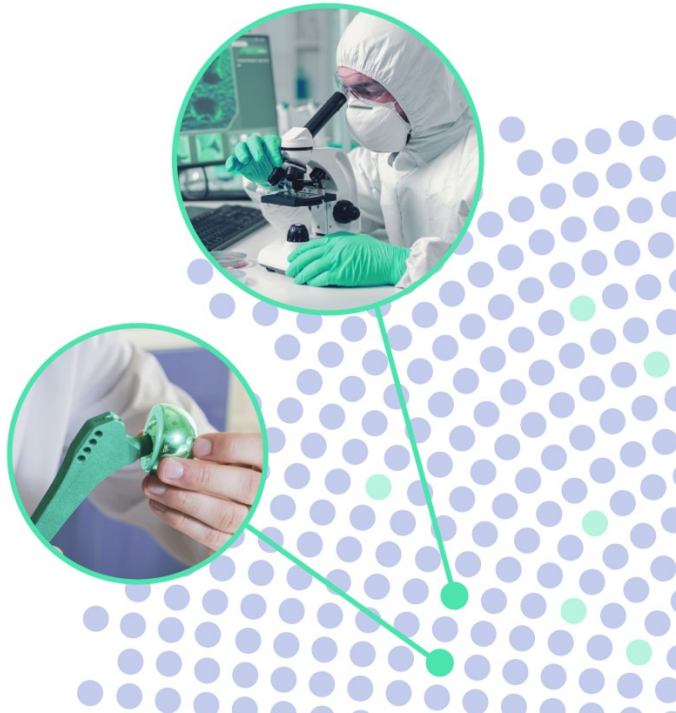
BIOMATDB

Introduction to the BIOMATDB Project

Advanced Database for Biomaterials with Data Analysis and Visualisation Tools Extended by a Marketplace with Digital Advisors

MINDS & SPARKS GmbH

Celine Rabé | Project Manager & Researcher



This project has received funding from the European Union's Horizon Europe Coordination & Support Action under Grant Agreement No 101058779.

FACTS & FIGURES

Key information

Programme
Horizon Europe

Project Type
Coordination and Support Action

Project duration
33 months (01/06/2022 – 28/02/2025)

Partners
12 (+3 subcontractors) from
8 countries

Budget
€2,799,150.00

Main Challenge

*„One of the main challenges is to provide **accessible and well-structured data of biomaterials** for all relevant practitioners and user groups."*

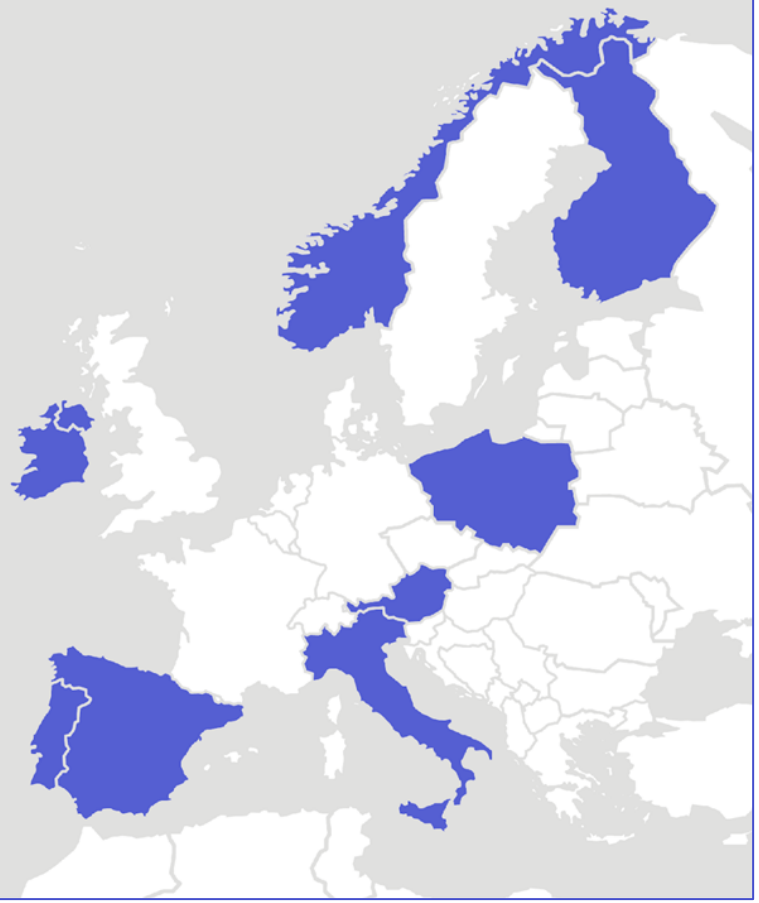
Mission

*"Create a database of biomaterials, providing detailed information on the **chemical-physical, biological and toxicological properties** accessible to wide variety of end-users, for e.g. researchers, companies and clinicians for the purposes of evaluating the biological and clinical usefulness also in the **areas beyond their intended primary applications**"*

Consortium

The Expert Team

SYNYO GmbH 1 Vienna Austria	Barcelona Supercomputing Center 2 Barcelona Spain	UNIVERSITY OF OSLO 3 Oslo Norway
UNIVERSITAT POLITECNICA DE CATALUNYA 4 Barcelona Spain	TAMPERE UNIVERSITY 5 Tampere Finland	WEST POMERANIAN UNIVERSITY OF TECHNOLOGY IN SZCZECIN 6 Stettin Poland
MINDS & SPARKS GMBH 7 Vienna Austria	CEC BUSINESS COUNCIL OF THE CENTER REGION 8 Coimbra Portugal	CLUSTER-ER INDUSTRIE DELLA SALUTE E DEL BENESSER 9 Bologna Italiy
NATIONAL UNIVERSITY OF IRELAND GALWAY 10 Galway Ireland	FUNDACIÓN PARA LA I NVESTIGACIÓN BIOMÉDICA DEL HOSPITAL NIÑO JESÚS 11 Madrid Spain	ECHALLIANCE 12 Belfast Ireland



Osnat Hakimi

Researcher / DEBBIE Project Lead

Yannis Missirlis

Biomaterial Pioneer / Professor

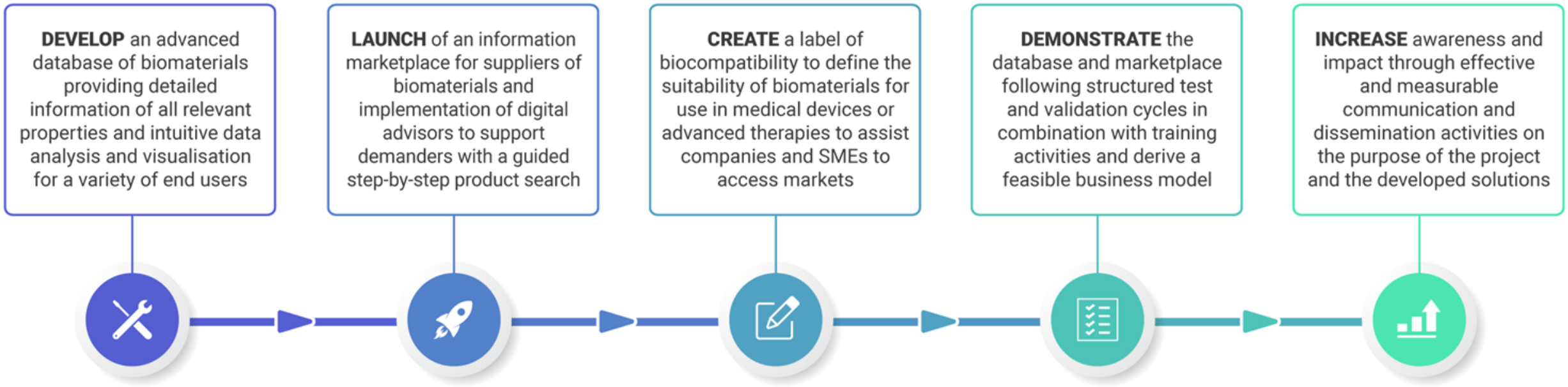
Carla V Fuenteslópez

Bioengineer

OBJECTIVES

Key Information

BIOMATDB



MAIN OUTCOMES: Technical Solutions

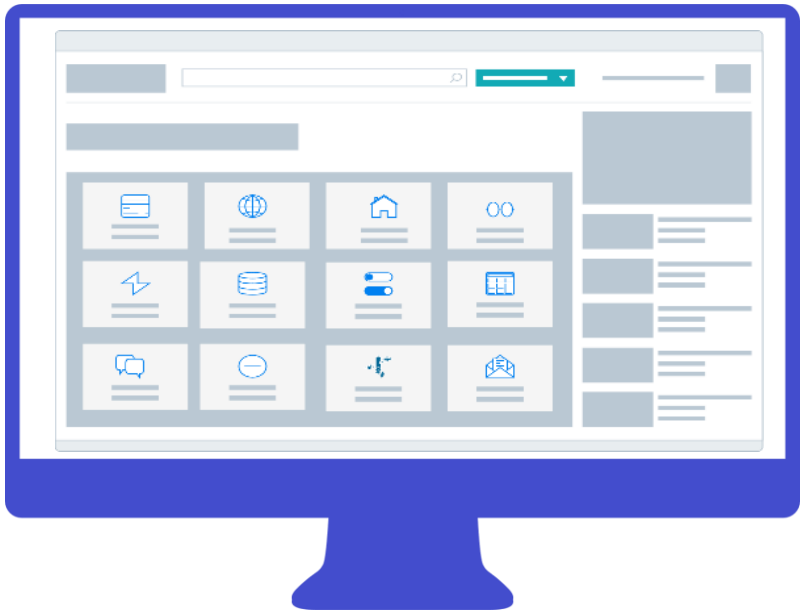
Overview

Biomaterial Database

Biomaterial Database, providing detailed information on the chemico-physical, biological and toxicological properties accessible to a wide variety of end-users such as researchers, companies, clinicians, etc.

www.biomaterialdatabase.com

Biomaterial Marketplace



Visual representation of the **supplier organisations** and their **biomaterial products,** focusing on B2B / B2G and addressing professional demanders like industry, hospitals, medical institutes, universities, ministries etc.

www.biomaterialmarketplace.com

EXPECTED PROJECTS IMPACTS

Advanced Database and Marketplace for Biomaterials

BIOMATDB

Improved Data Access: Improved access to valuable data and tools by linking to external resources for cross disciplinary data exploitation and integration

Advanced Tools: Domain specific text mining, data analysis, visualisation tools and decision support mechanisms in context of biocompatibility

Cost-Effective R&D: Improved biomaterials research, development and exploitation cost-effectiveness for applications through shared biomaterials knowledge bases

Economic impact based on an extensive data pool with deep analysis capabilities and advanced data visualisation options

EXPECTED PROJECTS IMPACTS

Advanced Database and Marketplace for Biomaterials

BIOMATDB

Awareness: Raising awareness on sharing and big data awareness and interest among the biomaterial research community and industry.

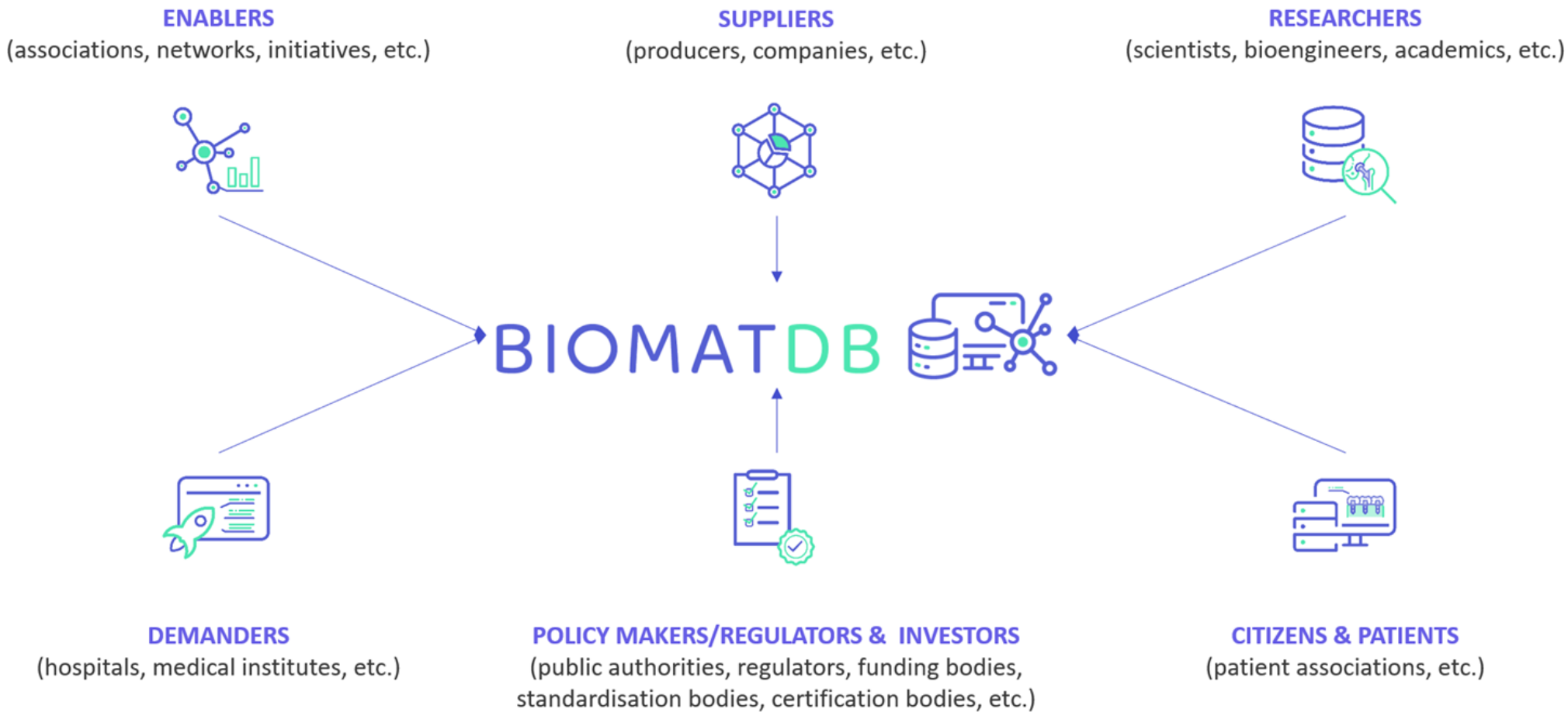
Support for SMEs: Support for the suppliers of biomaterials (companies, especially SMEs) in choosing and facilitating market access

AI Acceptance: Increase the public acceptance of Artificial Intelligence and related modern technologies and its benefits

EU Competitiveness: Impact on the competitiveness of the European Union in the field of biomaterials, medical devices and biomedical engineering

BIOMATDB PROJECT ECOSYSTEM

Main stakeholders



BIOMATERIAL DATABASE

UNLOCK THE POTENTIAL OF BIOMATERIALS

Overview of the BIOMATERIAL DATABASE

BIOMATDB

Key advantages

ENHANCED SEARCH FUNCTIONALITY:

The database utilizes machine learning and AI algorithms to power a highly optimized search process, enabling quick access to biomaterial-related articles from millions of sources.

EXPERT VALIDATION AND QUALITY ASSURANCE:

The database integrates expertise from multiple fields, to enhance accuracy, relevance and reliability of its content. This layer of validation supports user confidence while allowing flexibility in assessing data for specific research needs.

USER-FRIENDLY INTERFACE:

The clean and structured UI, provides an inviting and intuitive experience

VISUAL ANALYTICS FOR INSIGHTFUL DISCOVERY:

With built-in analytics tools, users can identify and explore patterns and trends within biomaterials research. This allows for a comprehensive understanding of associations, leading to more informed research decisions and potential collaborations.

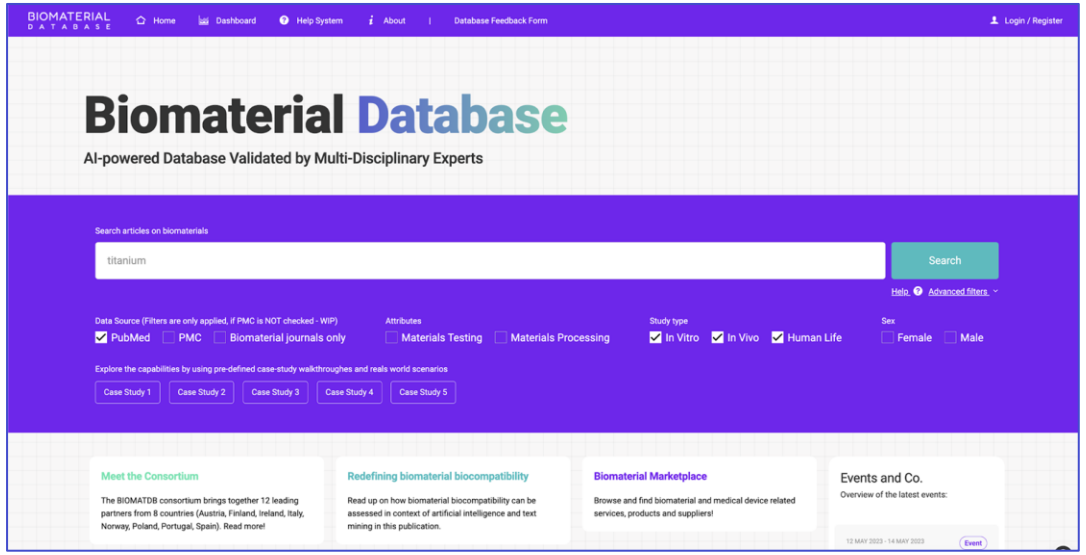
CONVENIENT FEATURES:

Features like (bulk) citation generation, PDF export, and quick article downloads.

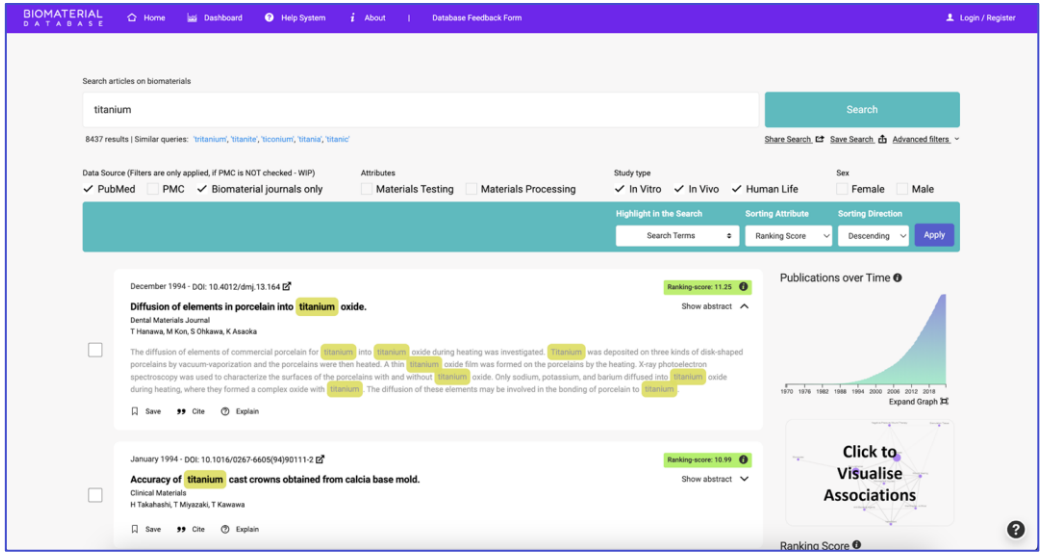
Biomaterial Database Search

Components and Functionality

BIOMATDB



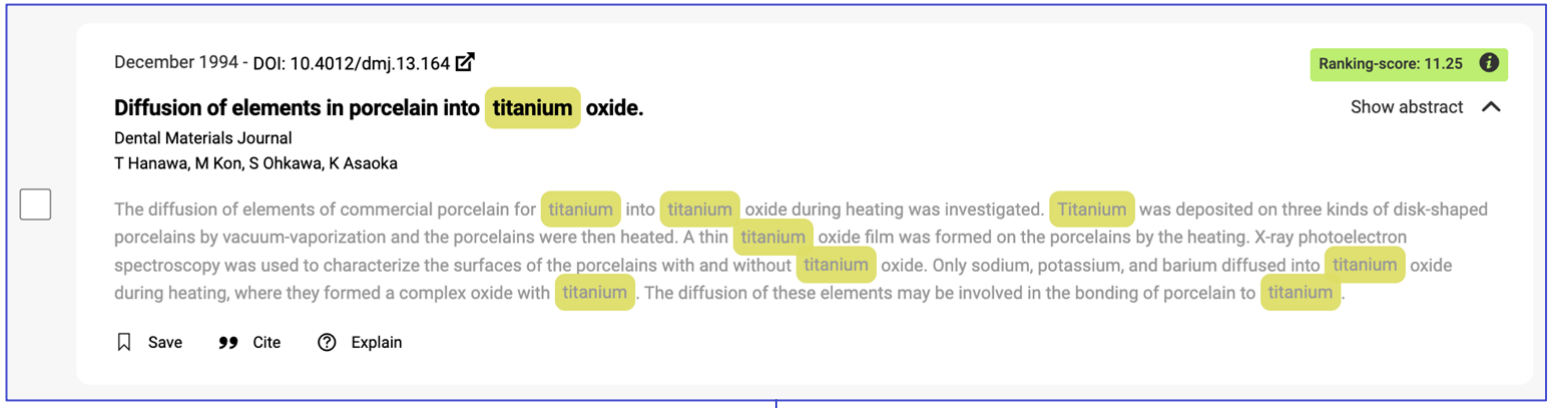
Advanced search with a clean UI.

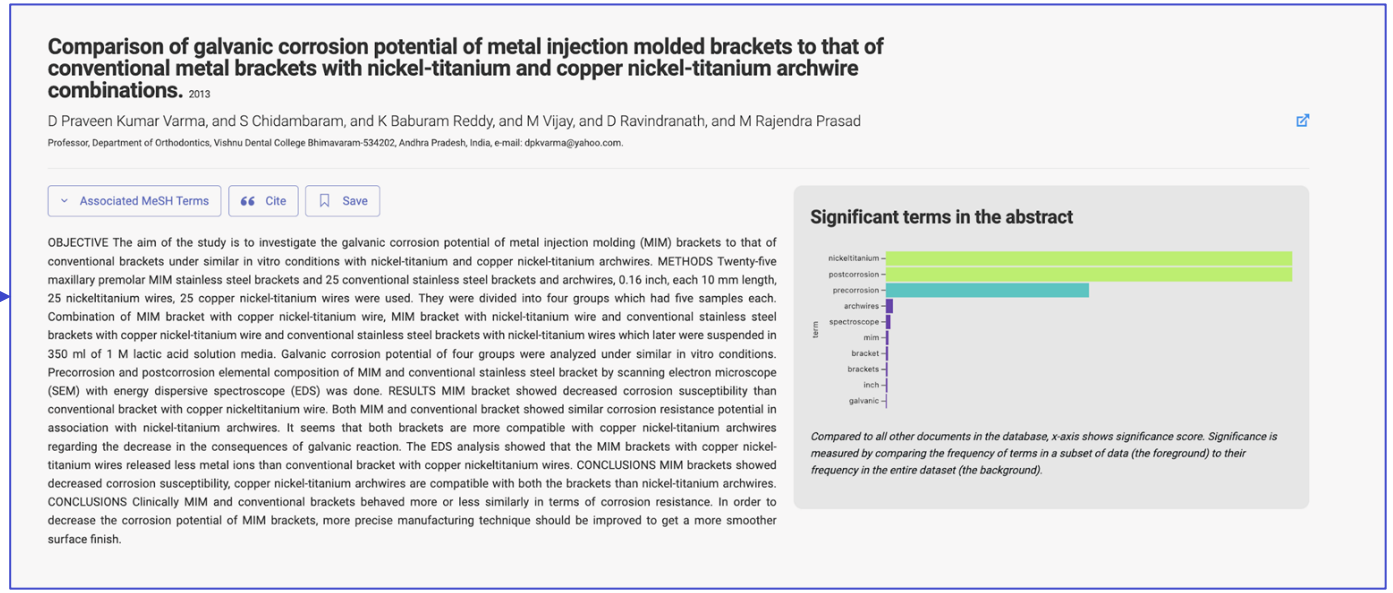


Clear Presentation of search results, with various filter options and highlighting.

Biomaterial Database Detail Views

Components and Functionality

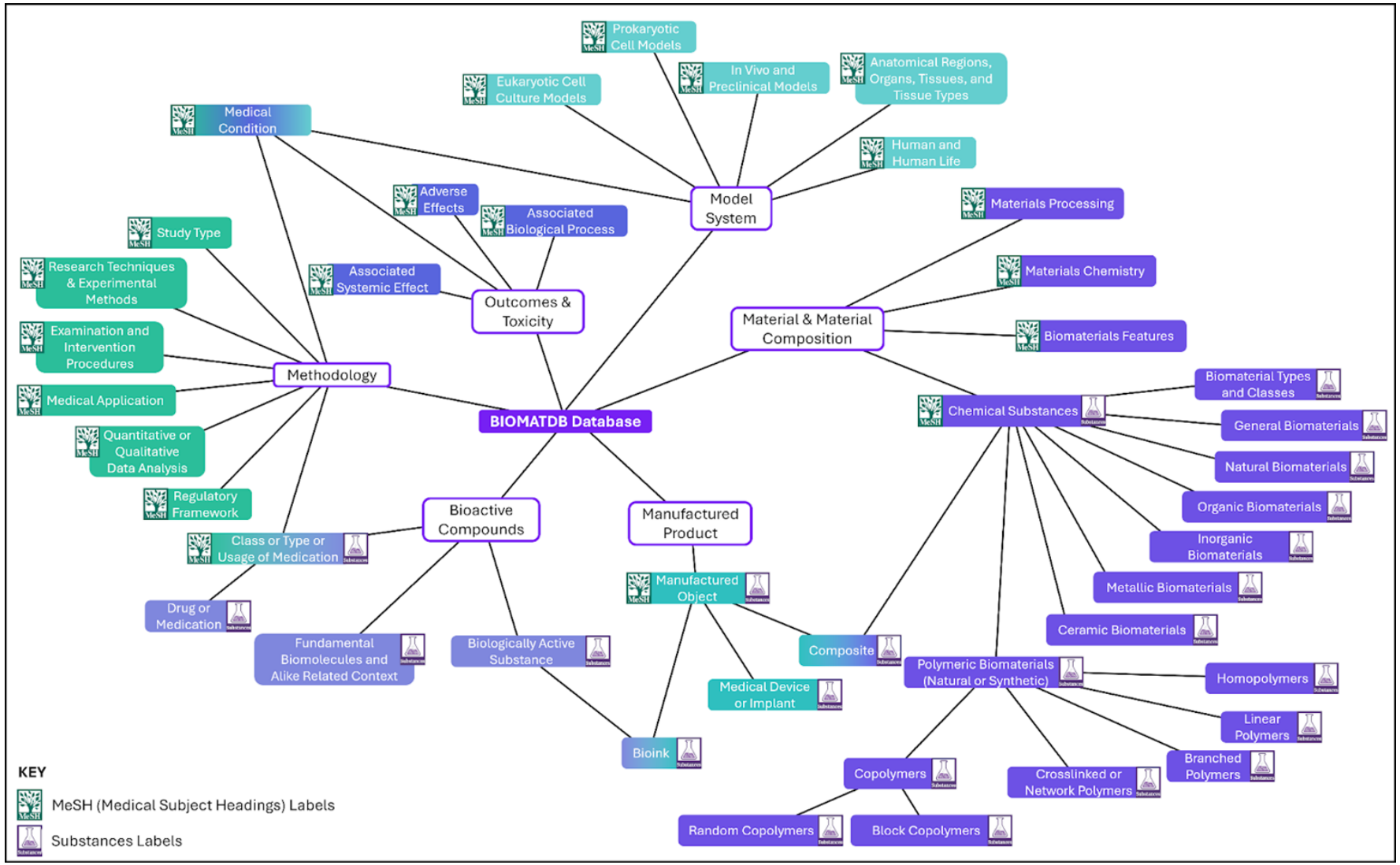




Search Filters: MeSH Terms and Biocompatibility Assessment

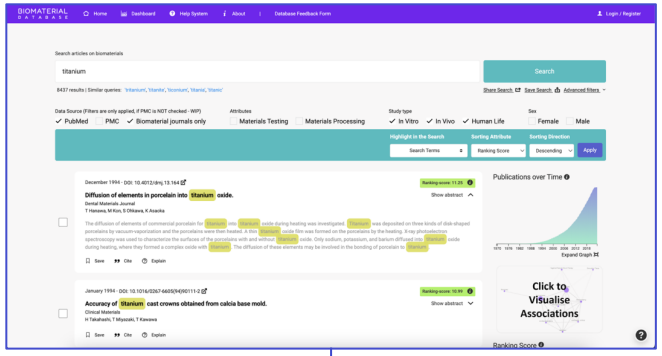
BIOMATDB

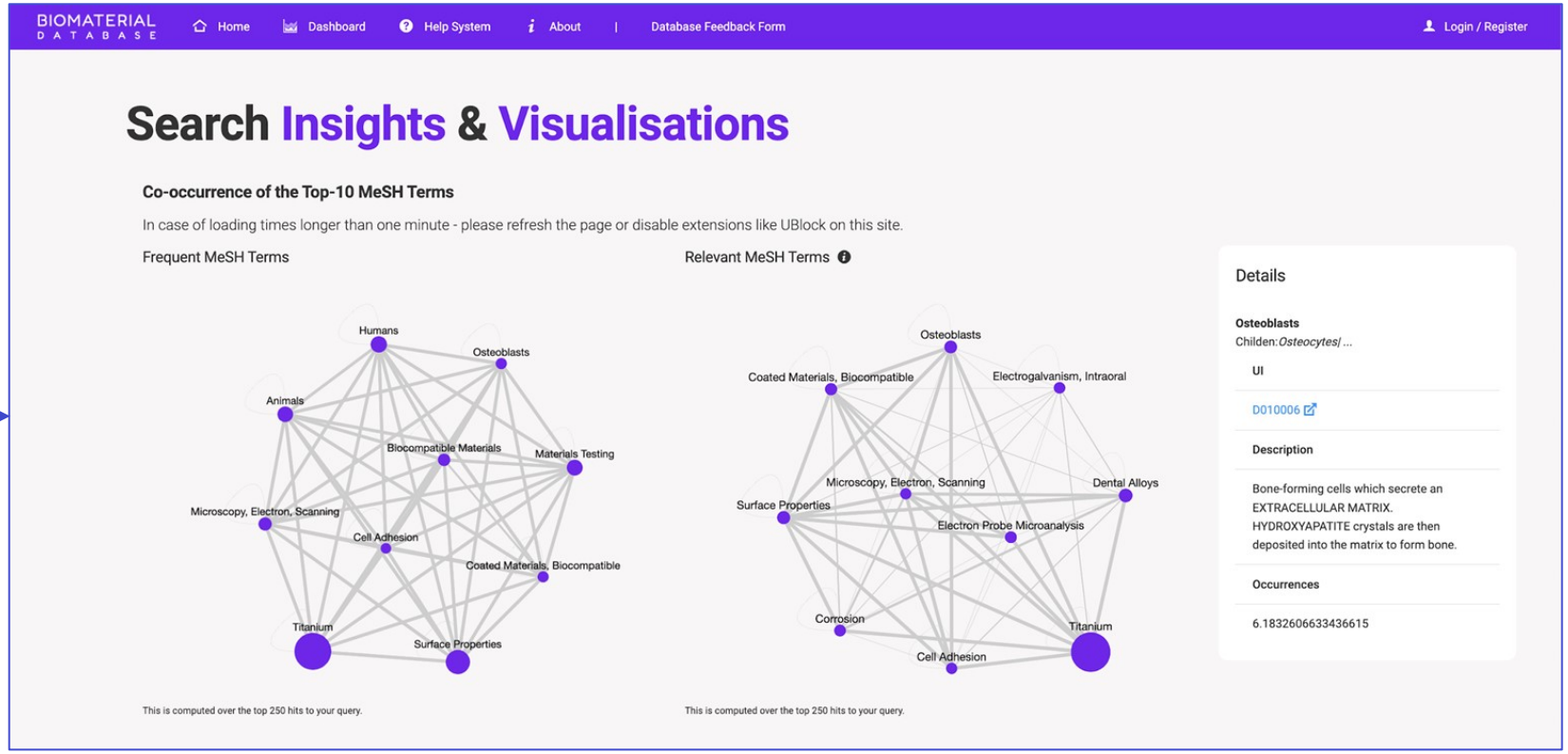
Metadata Tree and Structure



Node Link Visualisations

Assessing Associations

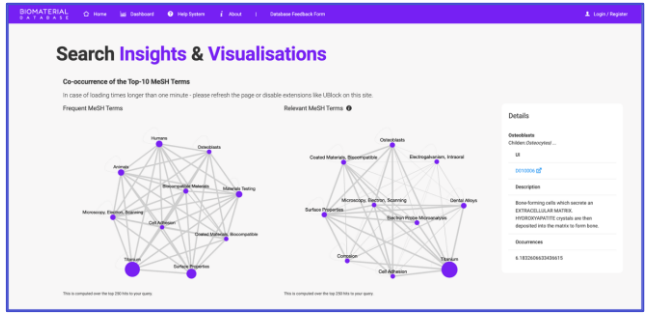


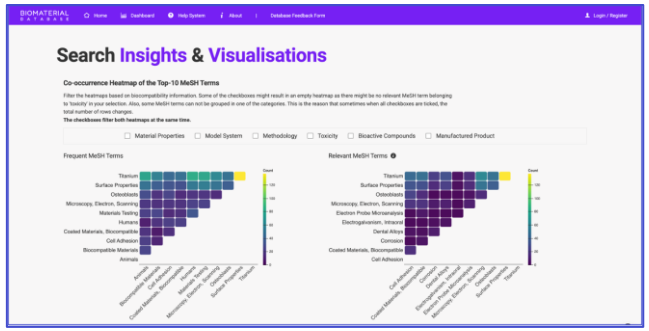


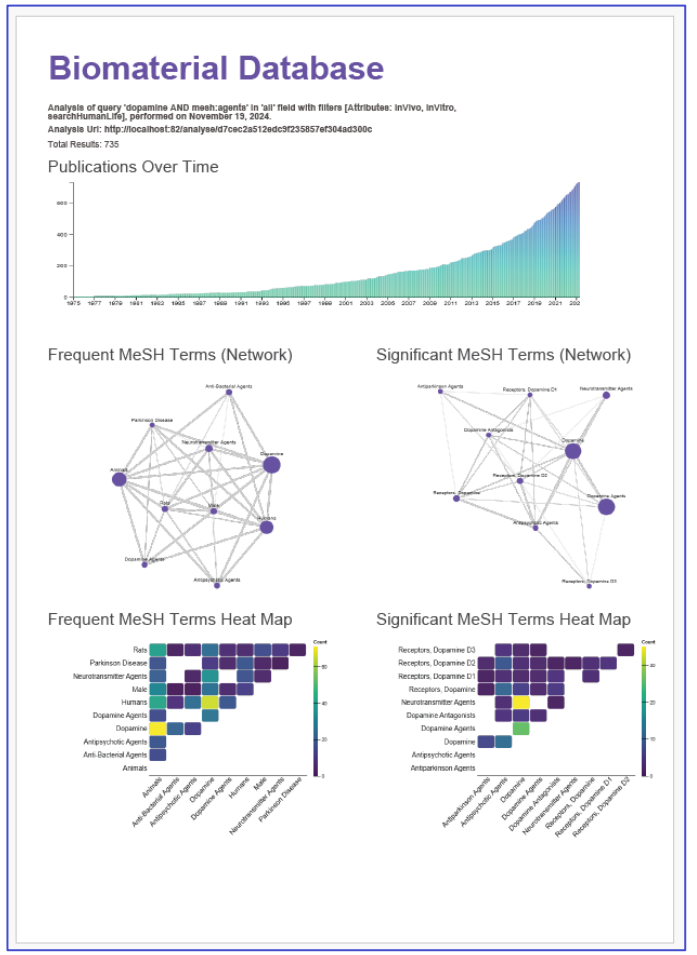
Advanced Analytics and Visualisations

Export Visualisations

Components and Functionality



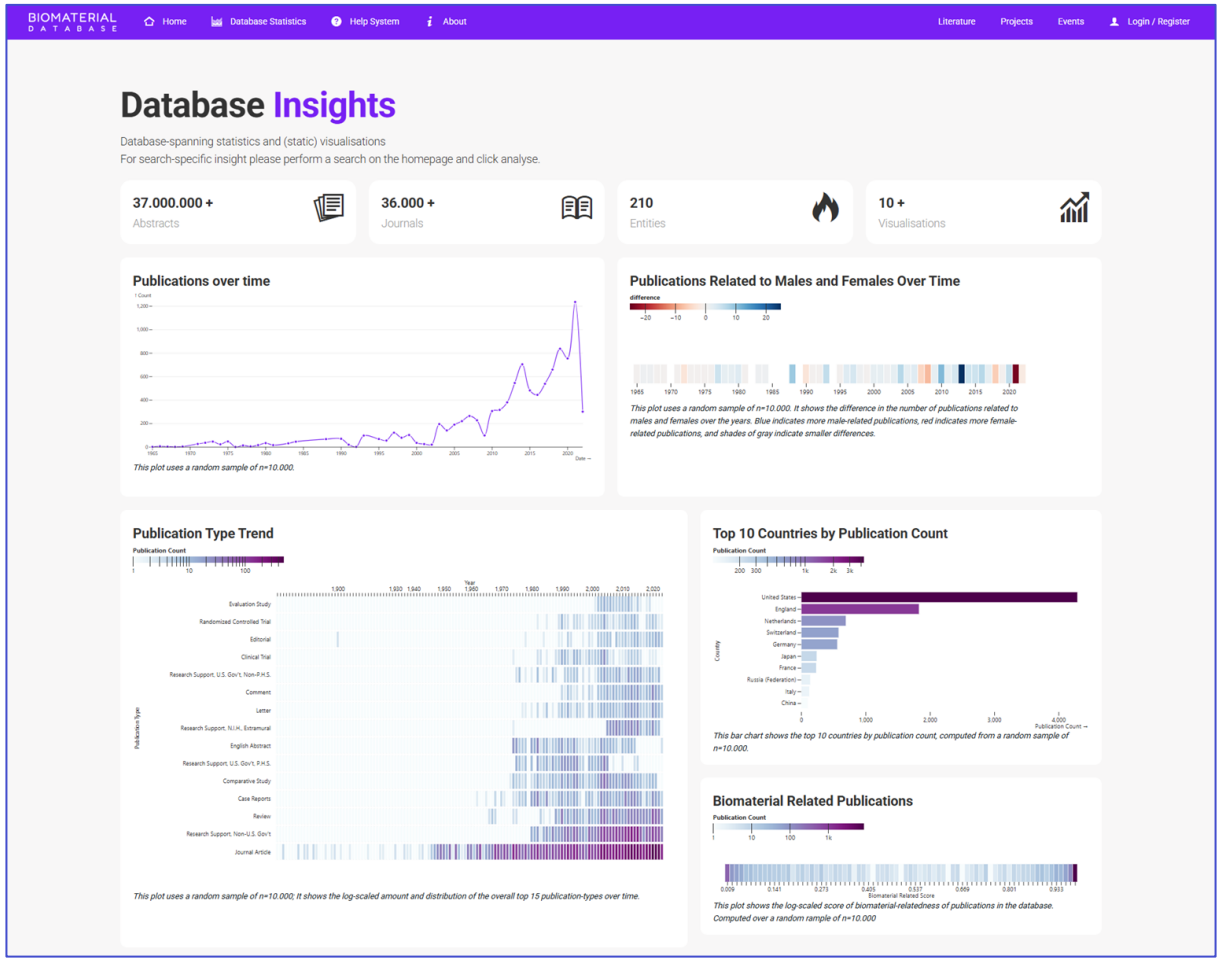




Report Generation

Biomaterial Database Statistics

Components and Functionality



Database-spanning statistics foster data understanding

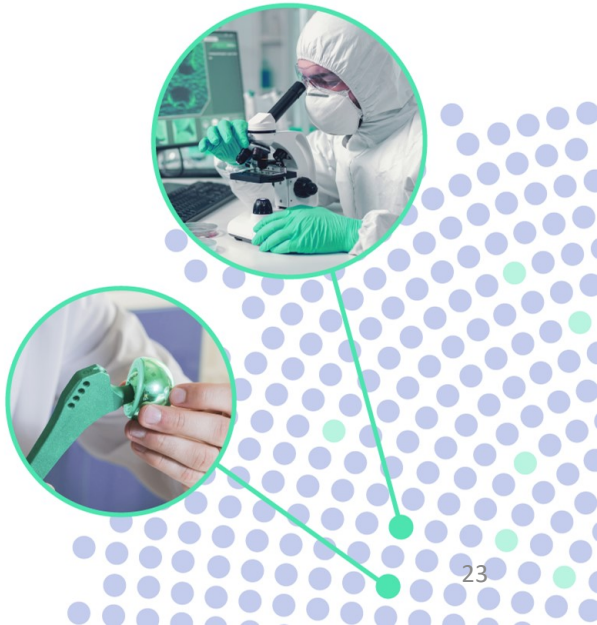
START OF LIVE DEMONSTRATION

Q&A | FEEDBACK

Biomaterial Database

Explore the Biomaterial Database -
best done on a laptop or computer!

biomaterialdatabase.com



Thank you for your attention!
Contact us, get involved, stay updated:

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www.biomatdb.eu

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